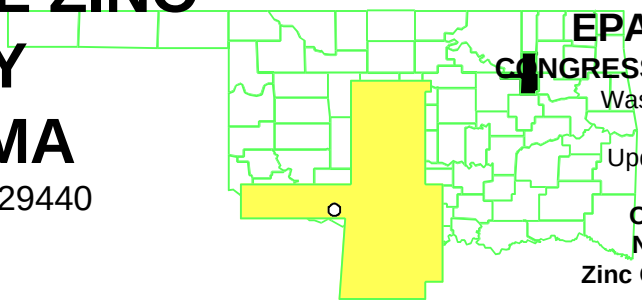
NATIONAL ZINC COMPANY OKLAHOMA

EPA ID# OKD000829440



EPA REGION 6
CONGRESSIONAL DISTRICT 05
Washington County
Bartlesville
Updated: 06/19/97

Other Names:
National Zinc
Zinc Corp. of America

Site Description

Location:
- West 11th and Virginia Streets
- West side of Bartlesville, near the Washington County line

Population:
- Approximately 5,000 people live within one mile of the site.
- An estimated 1,700 students attend schools, and 170 people work near the site.

Setting:
- The site area is a mixed residential, commercial, and industrial area.
- The contaminated area is approximately 8 square miles.
- The source of contamination is a zinc smelter of approximately 150 acres.
- Air dispersion of heavy metals, including lead and cadmium, and community fill projects using smelter slag.

Hydrology:
- The site is characterized by a surface of silt and sandy loam.
- Subsurface formations consist of shale, siltstone, sandstone, and limestone.
- No ground water contamination issues exist at this time.

Wastes and Volumes

The principal pollutants at the site include:

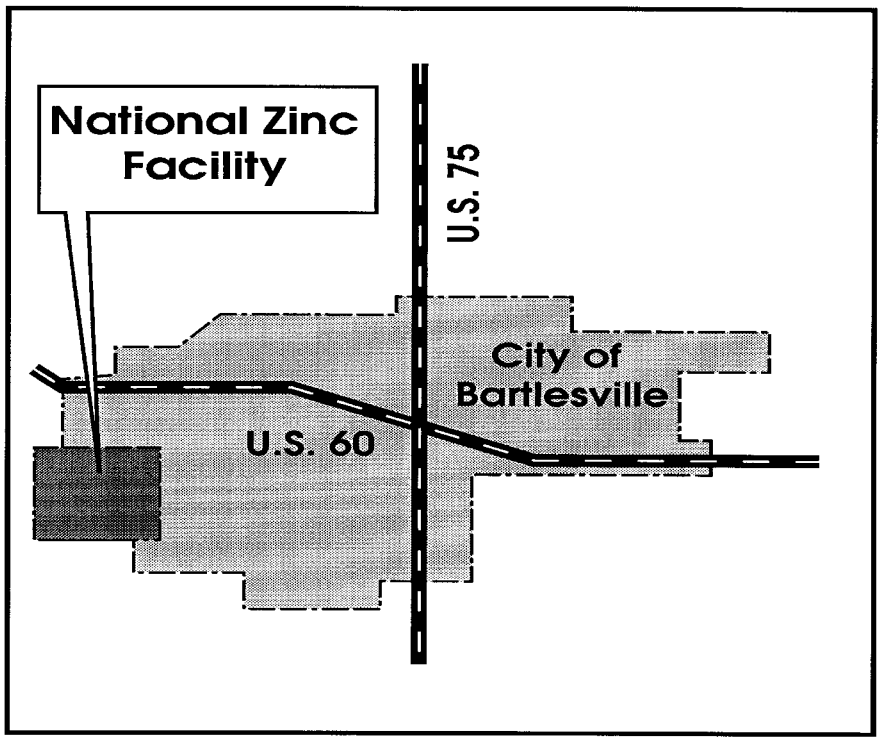
- Lead (soil): 12,000 ppm
- Cadmium (soil): 1,400 ppm

The total volumes of these wastes are undetermined at this time. (PPM = Parts Per Million)

Site Assessment and Ranking

NPL LISTING HISTORY
Site HRS Score: 50.00
Proposed Date: 5/10/93
Final Date: Pending
NPL Update: No. 14

Site Map and Diagram



The Remediation Process

Site History:

- Zinc smelting operations have been conducted at the smelter site since 1907.
- Air emissions were uncontrolled until 1976, when the old retort-type smelter was replaced by an electrolytic smelting process.
- The pre-1976 operations are presumably the source of the widespread heavy metal contaminations at the site.
- A significant amount of contamination resulted from the use of slag material and other smelter waste in fill projects in the area.
- Superfund is addressing the contamination outside of the Zinc Corporation of America facility, the current owner, and contamination within the facility fence is being addressed under authority of the Resource Conservation and Recovery Act (RCRA).
- A removal action addressed contamination in 29 high access or public access areas (schools, day care facilities, playgrounds, etc.) in fall 1992. A removal action in 1993 addressed 22 residences of individuals with elevated blood lead levels. Soil contaminated with lead above 500 parts per million (ppm), and with cadmium above 30 ppm, was excavated and removed. The excavated areas were back-filled with clean soil and sodded.
- The State of Oklahoma selected a remedy in December 1994 including excavation and off-site disposal of soil from residential properties and a mixture of approaches for commercial properties.

Health Considerations:

- Blood lead studies funded by Agency for Toxic Substances Disease Registry (ATSDR) and performed by Oklahoma State Department of Health (OSDH), (now Oklahoma Department of Environmental Quality [ODEQ]), in 1991 and 1992 indicate that approximately 14% of the children in the contaminated area have elevated levels of blood lead greater than 10 micrograms per deciliter (ug/dl).
- The study revealed that children on the west side of Bartlesville, the side where the facility is located, had elevated levels of blood lead whereas the children on the east side did not.

Record of Decision

Signed: December 13, 1994

- A Record of Decision (ROD) was signed by the State of Oklahoma on December 13, 1994.
- The selected remedy included: (1) replacement of soil on residential properties with greater than 925 ppm lead, 100 ppm cadmium, and 60 ppm arsenic; (2) Contaminated soil at commercial properties will be addressed through a combination of capping, replacement, tilling, and phosphate treatment.

Community Involvement

- Community Involvement Plan: Developed 4/93
- Open houses and workshops: 7/92, 9/92, 6/93, 11/93, 2/94, 3/94, 6/94, 9,94, 12/94, 2/95, 4/95, 8/95, 3/96, 5/96
- Original Proposed Plan Fact Sheet and Public Meeting: 9/8/94
- Original ROD Fact Sheet: N/A
- Milestone Fact Sheets: Approximately 10 have been published from 1993 to present.

- Citizens on site mailing list: 35
- Constituency Interest: Site is high profile; some concern exists about the economic impact to the community if site were to be listed as final on the National Priorities List (NPL). Some "Environmental Justice" issues have been voiced.

- Site Repository: Bartlesville Public Library, 600 S. Johnstone, Bartlesville, OK 74005
  - Established 9/92

Technical Assistance Grant

- Availability Notice: Published 4/93 - citizens also made aware at availability sessions.
- Letters of Intent acknowledged on 5/30/93 in the Bartlesville Enterprise-Examiner.
- Letters of Intent Received:
  1) Bartlesville Environmental Information Coalition (BEIC) - 5/5/93
  2) Citizens Against Toxics (CAT) - 5/20/93
- Final Application Received: 5/94
- Grant Award: TAG awarded by potentially responsible parties (PRPs) in June 1994 to consolidation of citizen groups.
- Current Status: Consolidation of citizen groups participating in TAG process. (No TAG activity or involvement by EPA).

Fiscal and Program Management

- **Remedial Project Manager (EPA):** Noel Bennett, P.E., 214/665-8514, Mail Sta. 6SF-AP
- **State Contact:** Scott Thompson, ODEQ, 405/271-7213
- **Community Involvement Coord. (EPA):** Donn Walters, 214/665-6483, Mail Sta. 6SF-P
- **Attorney (EPA):** Jim Costello, 214/665-8045, Mail Sta. 6SF-DL
- **State Coordinator (EPA):** Roberta Hirt, 214/665-8079, Mail Sta. 6SF-AP
- **Prime Contractor:** State - PRP Pilot Project

Cost Recovery:

- Potentially responsible parties (PRPs) Identified: 10
- Viable PRPs: 3
- Two PRPs agreed to conduct a removal action involving the removal of soil from residential properties that have lead concentrations exceeding 1,500 ppm and cadmium concentrations exceeding 90 ppm.
- One PRP agreed to conduct the remedial action under a consent agreement with the State.

Present Status and Issues

- In 1992, the site was selected as a SACM (Superfund Accelerated Cleanup Model) pilot project. Within one year, 29 removal actions had been completed, over 4,000 soil samples had been taken to characterize a 36 square mile area, and a blood lead study had been completed showing elevated levels of blood lead associated with elevated soil lead levels.
- In 1993, at the request of elected representatives, community leaders, and potentially responsible parties, EPA agreed to allow the State and PRP's to carry out accelerated investigations and residential soil removal actions. In return, EPA would postpone final action regarding placement of the site on the National Priorities List. A ROD for the site was issued in December 1994.
- In March 1995, the responsible parties began the second year of removal activities to address highly contaminated soils at residential properties. Concurrently, the PRPs and the State of Oklahoma entered an agreement for the implementation of the selected remedy on August 7, 1995. At this time, the EPA removal activities ceased and State-lead remedial action began.

Benefits

- Approximately 1,000 residential properties contaminated with heavy metals are targeted for cleanup.
- In 1994 and 1995 contaminated soil was removed from approximately 400 residential properties by the potentially responsible parties under an EPA Unilateral Admininstative Order.
- A similar pace for residential cleanup is planned for the State-lead remedial action.
- Residential soil excavation and replacement under the remedial action resumed in May 1997 after a recess for the winter.
- From April 1996 through October 1996, approximately 250 additional properties were remediated.
- The ROD for operable unit 2 (ecological areas) was issued by the State on October 2, 1996.
- The remedial design for operable unit 2 is in progress and is scheduled for completion in the Summer 1997.
- Cleaning up the soils in the residential areas is expected to significantly lower the overall blood lead levels in the community.